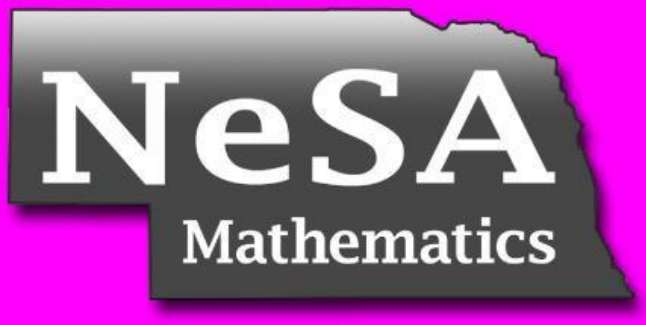


Nebraska State Accountability

Grade 6

Mathematics

Practice Test

Name:

Nebraska Department of Education 2010

Directions:

On the following pages are multiple-choice questions for the Grade 6 Practice Test, a practice opportunity for the *Nebraska State Accountability–Mathematics (NeSA–M).*

Each question will ask you to select an answer from among four choices.

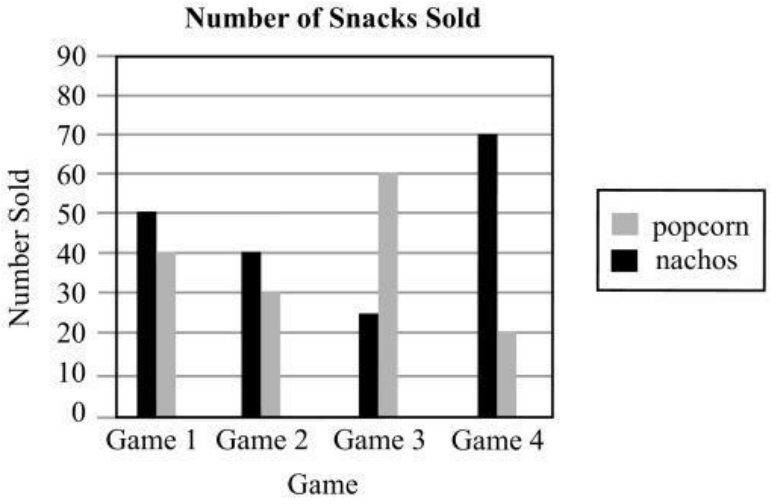
For all questions:

- Read each question carefully and choose the best answer.
- You may use scratch paper to solve the problems.
- The Mathematics Reference Sheet is provided in the back of the test booklet. You may refer to this page any time during the test.
- You may not use a calculator on this test.
- Be sure to answer ALL the questions.

Remember only one of the answers provided is the correct response.

STOP.

1. **Use the bar graph to answer the question.**



The graph shows the number of snacks sold at the first 4 games. At which game were the fewest snacks sold?

A. Game 1

B. Game 2

C. Game 3

D. Game 4

2. A family of 2 adults and 3 children went to a movie. The tickets cost $8 for adults and $5 for children. Which expression represents the total cost of the tickets?

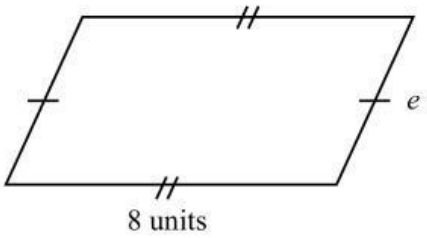
A. $2 + 3 + 8 + 5$

B. $(5 \cdot 8) + (3 \cdot 2)$

C. $(2 \cdot 8) + (3 \cdot 5)$

D. $(3 \cdot 8) + (2 \cdot 5)$

3. **Use the parallelogram to answer the question below.**



The perimeter of the parallelogram is 28 units. What is the length of side e?

A. 6 units

B. 8 units

C. 12 units

D. 20 units

4. **Use the list of numbers to answer the question below.**

22, 25, 14, 11, 23, 27, 46

What is the mode?

A. 23

B. 24

C. 35

D. No mode

5. Mary lives $1\frac{3}{4}$ miles from school. She rode her bicycle to school and back each day for 5 days. Which expression shows how to estimate the number of miles she rode?

A. $(5 + 2) \times 2$

B. $5 \times (2 + 2)$

C. $(7 + 2) \times 2$

D. $7 \times (2 + 2)$

6. Elizabeth has some stickers. She divides her stickers equally among herself and two friends. Each person gets 4 stickers. Which equation represents the total number, s, of stickers?

A. $s + 3 = 4$

B. $s - 3 = 4$

C. $\frac{s}{3} = 4$

D. $3s = 4$

7. Which expression shows a prime factorization?

A. $2 \cdot 9 \cdot 11$

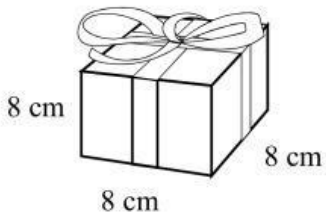
B. $2.5 \cdot 7 \cdot 3$

C. $1 \cdot 11 \cdot 13$

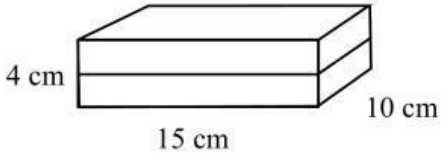
D. $2 \cdot 2 \cdot 2 \cdot 3 \cdot 11$

8. **Use the pictures below to answer the question.**

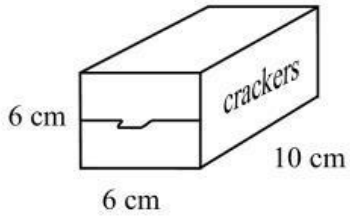
gift box



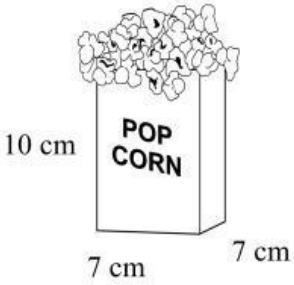
jewelry box



box of crackers



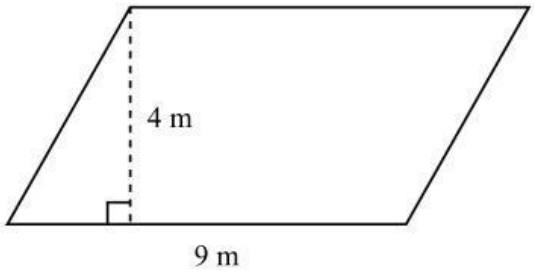
box of popcorn



Which box has the greatest volume?

A. gift box
B. jewelry box
C. box of popcorn
D. box of crackers

9. **Use the picture to answer the question below.**



What is the area of the parallelogram?

A. 5 m^2

B. 13 m^2

C. 26 m^2

D. 36 m^2

10. Taylor pays $5.25 for 0.5 yards of fabric. What is the cost per yard?

A. $1.05

B. $10.05

C. $10.50

D. $105.00

11. Which equation represents 36 less than a number, y, is equal to 13?

A. $y - 36 = 13$

B. $36 - y = 13$

C. $13 - y = 36$

D. $36 + y = -13$

12. Which list of numbers is ordered from least to greatest?

A. 167,213, 161,455, 17,400, 11,633

B. 10,354, 10,600, 104,321, 106,213

C. 160,233, 171,141, 11,645, 16,703

D. 12,209, 12,902, 125,466, 125,464

13. Mr. Jones rolls a six-sided cube numbered 1, 2, 3, 4, 5, 6. What is the probability he rolls a three?

A. $\frac{1}{6}$

B. $\frac{1}{5}$

C. $\frac{1}{3}$

D. $\frac{1}{2}$

14. What is the value of $4x + 9$, when $x = 4$?

A. 13

B. 17

C. 25

D. 52

15. **Use the table below to answer the question.**

Top Speed of Animals

Animal	Speed (mph)
cheetah	70
coyote	43
greyhound	39
rabbit	35
elephant	25
chicken	9

The table lists the running speeds of land animals. Which speed is a prime number?

A. 9 mph

B. 25 mph

C. 39 mph

D. 43 mph

16. Which step explains how to find the value of a in $6a = 72$?

A. add 6 to both sides

B. divide both sides by 6

C. multiply both sides by 6

D. subtract 6 from both sides

17. What is the value of p in $24 = 2p$?

A. $p = 4$

B. $p = 8$

C. $p = 12$

D. $p = 24$

18. Use estimation to answer the question. Which sum is greater than 1?

A. $\frac{17}{24} + \frac{13}{21}$

B. $\frac{9}{24} + \frac{10}{21}$

C. $\frac{12}{24} + \frac{9}{21}$

D. $\frac{11}{24} + \frac{8}{21}$

19. A tournament has 393 players with 3 players on each team. Which expression shows how to find the number of teams in the tournament?

A. $393 + 3$

B. $393 - 3$

C. 393×3

D. $393 \div 3$

20. **Use the diagram to answer the question below.**

When folded along the dotted lines, which geometric solid is formed?

A. cylinder

B. pyramid

C. rectangular prism

D. triangular prism

21. What is the value of $5 + 2 \bullet 15 + (12 \bullet 4)$?

A. 78

B. 83

C. 131

D. 153

22. **Use the chart below to answer the question.**

Frequency Chart

outcome	red	blue	white	green
frequency	𝍸 ||	𝍸 𝍸 |	|||	𝍸 ||||

Nan randomly takes a marble from a bag, records the color in the chart, and then returns the marble to the bag. She does this 30 times and records her results in the chart each time. The chart shows her results. What is the experimental probability of drawing a white marble?

A. $\frac{3}{30}$

B. $\frac{7}{30}$

C. $\frac{9}{30}$

D. $\frac{11}{30}$

23. Altogether, Sonia and Negin have $27.00. Sonia buys a shirt for $12.35 and Negin buys a pair of sandals for $10.11. How much money remains?

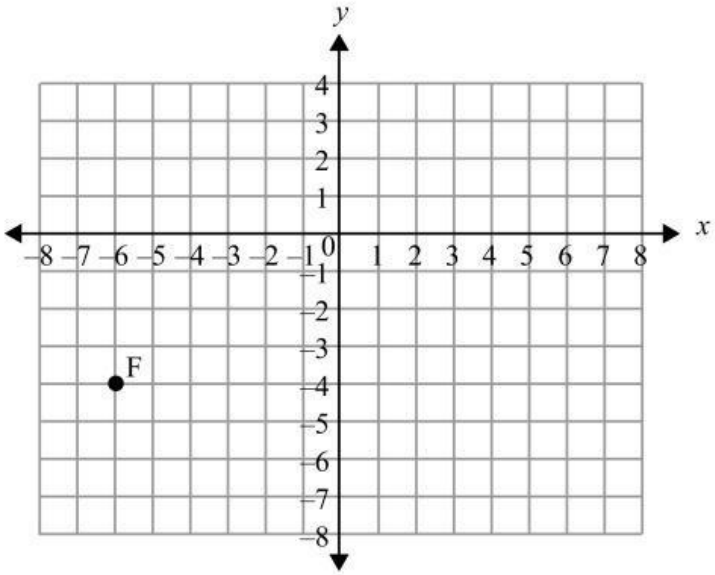
A. $4.46

B. $4.54

C. $5.36

D. $5.76

24. **Use the coordinate grid below to answer the question.**



What is the ordered pair for point F?

A. (–6, –4)

B. (–6, 4)

C. (6, –4)

D. (6, 4)

NeSA-M Grade 6 Reference Sheet

Shape	Area	Perimeter
Triangle	$A = \frac{1}{2}bh$	
Rectangle	$A = lw$	$P = 2l + 2w$
Parallelogram	$A = bh$	
Square	$A = s \times s$	

Key	
b = base	l = length
h = height	w = width
B = area of base	s = side length

3 – Dimensional Shape	Volume
Rectangular Prism	$V = lwh = Bh$

Standard Units	Metric Units
Conversions – Length	
1 yard (yd) = 3 feet (ft) = 36 inches (in.)	1 meter (m) = 100 centimeters (cm)
1 mile (mi) = 1,760 yards (yd) = 5,280 feet (ft)	1 meter (m) = 1,000 millimeters (mm)
	1 kilometer (km) = 1,000 meters (m)
Conversions – Volume	
1 cup = 8 fluid ounces (fl oz)	1 liter (l) = 1,000 milliliters (ml)
1 pint (pt) = 2 cups	1 liter (l) = 1,000 cubic centimeters (cu. cm)
1 quart (qt) = 2 pints (pt)	
1 gallon (gal.) = 4 quarts (qt)	
Conversions – Weight/Mass	
1 pound (lb) = 16 ounces (oz)	1 gram (g) = 1,000 milligrams (mg)
1 ton = 2,000 pounds (lb)	1 kilogram (kg) = 1,000 grams (g)